

Patent claims

1. Phase shifting wavefront superimposition method,
5 in particular a phase shifting interferometry
method, for wavefront measurement of optical
imaging systems, wherein
 - the intensities (I_n) of superimposition patterns
of object wavefronts and reference wavefronts
produced successively in time with respective
phase shifting by predefinable phase steps (ϕ_n)
are registered for a respectively predefinable
location and, from the registered intensities,
an object-induced phase difference (ϕ) between
object wavefront and reference wavefront is
determined for the respective location,
 - phase shift errors ($\delta\phi_n$) in the superimposition
patterns produced successively being determined
by means of a spatial superimposition pattern
evaluation and taken into account correctively
in determining the object-induced phase
difference (ϕ).
2. Phase shifting wavefront superimposition method
25 according to claim 1, further characterized in
that predefined phase jumps in a one-dimensionally
or multi-dimensionally periodic structure are used
to provide the object wavefronts or reference
wavefronts in the determination of the phase step
30 errors.
3. Phase shifting wavefront superimposition method
according to claim 1 or 2, further characterized
35 in that, in order to take corrective account of
the phase step errors in the determination of the
object-induced phase difference, compensating
correction contributions ($\delta\omega_n$) to apodisation
weights (ω_n) are determined which are used in a
relationship equation of the object-induced phase

P 42734 US

- 14 -

difference as a function of the superimposition pattern intensity.